

California **GARDEN**

MARCH-APRIL 1976

Volume 67, Number 2
Fifty Cents



RAUL RAMOS

FLORAL EVENTS, MEETINGS, and TOURS

- March 20th: Rancho Santa Ana Botanic Gardens in Claremont, California. This garden features Native plantings, trees and shrubs. Departure from Balboa Park 8:00 a.m.; from La Jolla Library at 8:30 a.m. PRICE: \$8.00. (contact Floral Office at 232-5762)
- April 3rd: Palm Springs Tour—the back country, Anzio-Borrego Desert to catch any wildflowers in bloom at the time; time for shopping in Palm Springs or to enjoy the tram to the top of San Jacinto Mt; visit to Hadley's Date Farm and a dinner stop in Banning; depart from Balboa Park at 8:00 a.m.; La Jolla Library at 8:30 a.m.; PRICE: \$10.50. (contact Floral Office at 232-5762)
- March 23 and April 27: Mrs. John Kirkpatrick's Flower Arranging Classes: Room 101 Casa del Prado; 10:00 a.m. to Noon.
- March 24 and 31; April 7 and 4 (Wednesdays): Martha Roseberg's Flower Arrangement classes Casa del Prado; 9:30 a.m. to Noon.
- April 20th: Oriental Gardens of America—a presentation by the author-lecturers Dorothy McFadden and James L. McFadden; 7:30 p.m., Room 101, Balboa Park.

OTHER EVENTS

- March 27 & 28: Ikebana International, Chapter 119 will present its Eighth Annual Festival of Ikebana and Japanese Arts; open both days 11:00 a.m. to 4:30 p.m.; Casa del Prado, Balboa Park; FREE.
- April 2nd through 4th: San Diego County Orchid Society will present the "Spirit of Orchids, '76"—their 30th Annual Orchid Show; Conference Building, Balboa Park; April 2nd—Preview-Reception 7:00 p.m. to 10:00 p.m.; April 3rd—open 10:00 a.m. to 10:00 p.m.; April 4th—open 10:00 a.m. to 5:30 p.m.; Admission \$1.00.
- April 3 & 4: Balboa African Violet Society will have their First Show in The Casa del Prado Memorial Library Room 104; open both days 11:00 a.m. to 4:30 p.m.; FREE.
- April 3 & 4: The International Fancy Guppie Show will be in the Majorca Room of the Casa del Prado Saturday—2:00 p.m. to 5:00 p.m.; Sunday—10:00 a.m. to 5:00 p.m.; FREE.
- April 11: Convair Garden Club will hold their Rose Show in the Majorca Room of Casa del Prado; open 1:00 p.m. to 5:00 p.m.; FREE.
- April 17 & 18: San Diego Rose Show - "Roses On Parade" - will be held in the Conference Building of Balboa Park; Saturday—2:00 p.m. to 9:00 p.m.; Sunday 10:00 a.m. to 6:00 p.m.; 50 cents admission.
- April 24 & 25: San Diego Bonsai Club will stage their Eleventh Annual Exhibit in the Majorca Room of the Casa del Prado; Saturday—10:00 a.m. to 8:00 p.m.; Sunday 10:00 a.m. to 6:00 p.m.; FREE.
- April 24 & 25: Coronado Floral Association presents their Golden Anniversary show "50 Salutes to the 200th"; Spreckles Park, Coronado (Orange Avenue); Saturday—1:00 p.m. to 4:00 p.m.; Sunday 10:00 a.m. to 4:00 p.m.
- April 24 & 25: Escondido Garden Club presents their 30th Annual Flower Show "This Is America"; the Masonic Temple, 1331 South Escondido Blvd., Escondido; Saturday—1:00 p.m. to 5:00 p.m.; Sunday 10:00 a.m. to 5:00 p.m.
- May 1 & 2: The San Diego-Imperial Counties Iris Society will present their 12th Annual Spring Show; Majorca Room, Casa del Prado; Saturday—12:00 noon to 5:30 p.m.; Sunday 11:00 a.m. to 5:30 p.m.
- May 1 & 2: The Vista Garden Club presents a standard flower show "Flower Revolution"; 160 Recreation Way, Vista, CA.; Saturday—1:30 p.m. to 5:00 p.m.; Sunday 10:00 a.m. to 4:00 p.m.; FREE.
- May 8 & 9: The La Jolla Garden Club presents their Spring Flower Show "Historical Highlights"; La Jolla Recreation Center, 615 Prospect Street, La Jolla; 1:00 p.m. to 5:00 p.m. both days.

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California GARDEN

Published Since 1909 by the SAN DIEGO FLORAL ASSOCIATION
Casa del Prado, Balboa Park, San Diego, California 92101

Monday through Friday
232-5762

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Our cover artist is Raul Ramos.

The daffodil on the cover is 'Roger', *Narcissus cyclamenis* hybrid, Division 6B, introduced in England in 1952 by Alec Gray. This daffodil (all daffodils are narcissus) grows one blossom to a stem, a reflexed perianth of primrose yellow with a small cup of deep gold. 'Roger' is long lasting both in the garden and for cutting. Since it is intermediate in size, it fits well in front border plantings as an early midseason bloomer. Maxine Johnson of Chula Vista grows 'Roger' as well as many other daffodils.

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Using Earthworms In The Garden

by STEPHEN TOLLEFSON

The second part of a two-part article begun last issue.

WHILE EVERYONE knows that earthworms are beneficial to the soil, few people realize that the earthworm can be utilized as a highly useful tool by the gardener—an incomparable soil building tool. In fact, the earthworm is one of the best and most effective ways known to man of dealing with problem soil and improving plant growth.

In most good soils, there is really no issue for using earthworms. They are already there in numbers. They are there because the soil is good, or rather because the soil contains sufficient moisture and organic matter to support their growth. Moreover, the soil is good because they are there. For hundreds or thousands of years, the earthworms have been there improving or maintaining the soil's fertility and texture.

But few of us have good soil. (It almost seems as though the most dedicated gardeners grow in the poorest soils.) In Southern California, even good soils are deficient in earthworms. Moisture and organic matter are lacking. Even when these exist or have been provided, earthworms seldom occur in any number here.

To determine if a soil contains an adequate earthworm population, there is a very simple test. Take a spadeful of soil and count all the adult and immature earthworms you can find. (Baby earthworms look like tiny, white wiggling threads.) If there are fewer than ten worms in the sample, there are not enough to have much effect on the soil. If there are more than ten, you already have good soil.

If your soil is deficient in earthworms, it is probably low in fertility, compacted, slow to absorb moisture, slow to drain, and hard to work. Or it is so fast to drain that plants are always suffering from lack of water. Does this sound like your soil? It is pretty typical of California soils.

The most effective way to improve such problem soils is usually a fairly simple matter of establishing a healthy earthworm population.

In most of the country, the earthworm popu-

lation can be built up pretty readily by providing the moisture and organic matter earthworms like. But in Southern California, this often does not work. Either there are no earthworms present to serve as breeder stock, or the earthworms present are the sluggish, slow-to-reproduce, slow-to-do anything brown-nose worm most commonly found here. I have heard of a man in Rancho Bernardo who has worked diligently for four years to create ideal living conditions for earthworms and still has none. Because of this, the best way to start building an earthworm population is to introduce the right kind.

The types of worms that are normally used for this process are the manure worm, *Helodrilus foetidus*, and the red worm, *Lumbricus rubellus*. These are two species that occur naturally most often in manure and refuse piles, where the organic content is extremely high. These are the types of worms that are by far the most commonly grown by commercial growers. And they are the types most useful to the gardener.

They are grown commercially because they are tough, adaptable, rapid-growing, active-feeding, and fast to reproduce. These are the characteristics that also make them useful to the gardener. While they occur naturally in manure piles, they are sufficiently adaptable that they will establish in ordinary soil if handled properly.

Earthworms are readily available in California, because this area has the highest concentration of growers in the country. Local sources can be found through the Yellow Pages or through want-ads in the paper. Any number of sources that will mail worms can be found advertised in such gardening publications as ORGANIC GARDENING AND FARMING. Earthworms generally cost \$5 to \$10 per pound. Do not buy worms sold as fishing bait because these are all large worms that are not only expensive, but do not adapt as readily to new conditions as do younger worms. Also avoid night-crawlers and other exotic types, because they either

will not adapt here or will not be as beneficial to the soil as manure or red worms. "Bed run" grade is usually the best buy because this includes all sizes of worms. A pound of these contains about 1000 worms of various sizes.

The number of worms you buy will depend on how intensively the soil is worked and how impatient you are to see results. For areas where vegetables or cut flowers are grown and where immediate results are desired, you should buy ten worms per square foot, or one pound per hundred square feet. Elsewhere you can use fewer worms if you wish.

Introducing the worms is quite a simple process. At three to four-foot intervals, remove a spadeful of earth throughout the garden. Into each hole, drop about 100 worms and a large handful of compost, leaf mold, or rotted manure, and fill the hole back in. In established gardens, dig the holes wherever it is convenient. In new gardens, lay out a uniform grid. Around trees and large shrubs, the holes are best dug at the drip line. If you are planting new trees or shrubs, you can put the worms in the same hole as the plant.

To properly establish the worms, you must provide the conditions they require—moisture and ample organic matter. Ordinary garden watering should provide adequate moisture, but you might be extra careful during the first month or two. Planting the worms in the fall or winter is best because the rain will moisten the soil more effectively than your sprinkler, and cool temperatures help keep the soil from drying out too fast. The necessary organic matter can be provided by spreading a mulch of compost, leaf mold, or rotted manure at least one-inch thick over the entire planted area. Repeated light top-dressings will prove advantageous. The leaf drop from ornamental plants, lawns, and fruit trees usually provides a continuous source of food for the worms. But flower and vegetable gardens and areas that are kept raked clean will need regular mulching to provide a steady source of food. The more organic matter you add, the greater will be your worm population and the healthier your garden.

The plantings that benefit most from introducing earthworms are vegetable and flower gardens, lawns, and orchards. Ornamental plantings are less critical, unless your soil is very bad, but they

will show improvement there as well.

Beyond a general planting program, there are some specialized uses for earthworms. The most common is in the compost pile. Just as they aid decomposition in the soil, their feeding, tunneling, and mixing speed up the composting process and improve the quality of the finished product. As long as they can escape from the fresh, hot part of the compost pile, they will thrive there. In fact, they will multiply so much that you can harvest them from the pile to introduce to the garden. To separate the worms from the compost, let a pile of compost sit out in the sun on paving or on a sheet of tarpaper or plastic. As the sun dries out the compost, the worms will migrate to the center of the pile. After awhile, you can shovel off the top of the pile until you come to a ball of worms in the middle. The worms can go into the garden or back into the compost pile. The castings-rich compost is an excellent plant food, especially for container plants. A tea made from it is an excellent liquid food for house plants or for tender new plantings.

An exciting use for earthworms is in French intensive-type vegetable beds. Simply lay out your beds (three feet wide by six or eight feet long is a good size), and dig in a generous amount of worms, castings (if available), and compost to a depth of about eighteen inches (approximately two spade-depths). The best way is to spread a six-inch depth of earthworm-rich compost over the soil and dig it in thoroughly. Lacking that, you can use about a pound of worms, a one or two inch layer of castings (available from most earthworm growers), and a four to six inch layer of compost or rotted manure. You can plant most vegetables in a bed prepared this way, but the smaller leaf and root crops work the best. Very high yields can be produced, because you put the plants in very closely. Rather than spacing the plants in rows, you distribute them throughout the whole bed with the same spacing they would normally have within each row. So Swiss chard plants, for example, would be uniformly spaced about twelve inches apart throughout the bed. You can do this because the soil is so enriched by the earthworms that there are plenty of nutrients for all the plants. You need only be extra careful about watering. The last time I tried this, it

was in fairly rich, but not great, adobe soil. Aside from a little weeding and almost daily watering, the plants received no care. Within six or eight weeks, the beets were tipping the scales at nearly one pound each, and the Swiss chard was 2½ feet high. The chard was so thick, it was hard to reach in to harvest leaves from the inner plants. Both crops were tender and flavorful. Best of all, despite all that watering and the fact that the soil was never worked after planting, it did not become compacted. It stayed as light as forest loam. The only problem with the beds was eating all they produced.

To keep such beds producing indefinitely, one would need only to work in generous amounts of compost, leaf mold, or rotted manure before each round of planting. With such a method, even tiny plots of soil can provide quantities of food.

Earthworms have a use in nearly any garden—from large gardens with productive soil, to small plots with difficult soil. They can be used to prepare difficult soil for ornamentals, or to guarantee continued high yields from vegetable gardens, or even fruit trees. About the only place they may not be of major usefulness might be in the drought-tolerant, low maintenance landscape garden. But even here, they would be useful during the first year or two when watering is necessary to establish the new plantings. When the watering is ceased, the worms would be unlikely to maintain a permanent population, but until then they would have made a significant improvement in the soil that would yield definite long-term returns in the health and vigor of the plantings.

While, as I said, everyone knows that earthworms are good, it is time for a change in attitude. Earthworms are not just something to look kindly upon when you happen to run across one in the garden—they are a tool to be utilized for a better garden. □

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Pleasure With Roses

by *MARIANNE TRUBY*

PLEASURE IS DEFINED as an enjoyable sensation or emotion; a source of enjoyment, gratification, or delight.

A recent book takes up the question of how many pleasures we all miss just because we're not aware of them or don't know how to try them. The book continues on with the theme that we would all achieve a great deal more pleasure from everyday experiences if we were to become more AWARE of what goes on around us. I couldn't help but associate many ideas of the author with the pure enjoyment I have always received with the many aspects of growing roses and the various associations that go along with this hobby. For many years our home has been the stopping off place for school children who choose a rose for their teacher—on their way home they select one for Mother. Corsages for weddings, roses for new mothers and bouquets for those in hospitals are only a few aspects of pleasure derived from roses.

Here in Southern California where roses are almost in continual bloom, the rose is a continual pleasure. Roses should be everywhere. The rose is the complete flowering plant; even the largest of gardens may be planted entirely with roses and not one corner of the garden need lack color for most of the year. Few climbing plants will prove as attractive when in bloom than the climbing forms of the rose, and none will clothe a wall so quickly. A low wall will be a truly beautiful spot when planted with a row of shrub or floribunda roses. But roses should be planted where their beauty may be most appreciated.

Truly the rose may be considered to be one of the most labor saving of all plants. Greater resistance to mildew and rust has been bred into recent plants. The bush rose requires no support. The staking and tying that is necessary for so many plants is not required. Soil cultivations, too, may be reduced to a minimum by the use of a mulch. Weeds will be almost entirely suppressed

if suitable mulching is heavy and applied in spring immediately after the plants have been pruned. The mulch always reduces water requirements. If plants are given just a little care, they will respond by remaining healthy and vigorous for years and rarely will they need replacements. One does not have to "divide" to maintain health as with other perennials. They do require routine spraying and the removal of dead blooms when opportunity permits.

The "true rosarian" will achieve special pleasure from his newly pruned garden. Exactly when to prune is a question much discussed by the people interested in growing roses for show. Soil and climate are deciding factors and as a rule plants growing in light soil should be pruned a week or so earlier than those grown in heavy land, for the sap will begin to rise earlier. Roses are considered deciduous plants and should be pruned while dormant. Here in Southern California our plants rarely can be considered truly dormant and there are various ideas abounding on how to achieve this state: withholding water, letting rose hips form (seed), using a dormant spray to defoliate, et cetera. Whatever method you use, pruning is a must and in San Diego it is usually done from the middle to end of January. Whether the rose bloom is to be grown for exhibition or for garden display will have some bearing on the severity of pruning. A bush pruned hard will be able to concentrate its total energies on the production of vigorous basal shoots. The quantity of bloom will be much restricted and the plants will be rather late coming into bloom. Light pruning will bring plants into bloom early but the quality of bloom will often be inferior. More top growth at the expense of basal shoots will cause the plant to lose vigor before the end of the season. Moderate pruning will maintain the shape of the plant and the plants will be well-clothed in foliage almost to the ground—a very desirable attribute for general landscape purposes. Flori-

bundas prefer less hard pruning than will hybrid teas.

I love to look out over my newly pruned garden during the months of February and March even though not a bloom is in sight. Rose bushes themselves have a great deal of character and it is a great delight to watch for those little spots of life appearing on the bud union showing the beginning of a new basal shoot. By proper pruning, a bush (most varieties) will almost renew itself during the year with healthy new canes. Foliage of different varieties is very distinctive and those of us interested in identification will do well to stroll through our garden regularly during these months to acquaint ourselves with the various leaf formations and characteristics of each variety. "You have to grow them to know them" is a time-worn statement of rosarians but a most true statement. Many bushes are easily identified without blooms and your ability to do so will often be a surprise to you.

Several years after planting our first roses we joined the San Diego Rose Society and the American Rose Society. We were content with reading their literature and attending their shows where we took copious notes on varieties we wished to buy and looked with cynicism at the prize winners, feeling our roses at home were every bit as good. I believe it was approximately 1963 when we decided we were ready to take an active part in rose exhibiting. I recall quiet distinctly the first bloom we entered was a Tropicana in a little rose show at a monthly pre-show of the society. After awarding the ribbons the judges used our entry as a horrible example of exhibiting. The rose itself was truly beautiful but too far open, not enough stem and had side buds. This was truly the beginning of a pleasure that I enjoy even to this day. The competition of exhibiting roses requires a whole new concept of rose growing, rose selection and rose cultivation. Not only must you grow outstanding blooms you must learn the ART of showing roses and an art it is indeed. Along with finding a whole new world to receive pleasure from you will learn a few things about yourself—can you be a "good winner" or as is often the case are you a "poor loser"? The annual San Diego Spring Show held each April is often the first rose show of the year in the U.S.

It is nearly always the largest in number of blooms shown. I have never attended an East Coast show but of those shows held in the Western half of the country there is little doubt ours is the largest. Each year before the show, society members hold a meeting devoted entirely to description of how to prepare and enter roses for show. If you have a desire to try rose exhibiting for the first time, I urge you to attend. The new friends you meet growing and exhibiting roses is of course another of the pleasures that comes your way. Visits to society meetings and shows are a good way of finding a consultant in your area. Many visitors to our garden live a few blocks away and did not know we grew roses until they saw our names on entry tags at the shows. Of course this is what exhibiting is all about. Its true purpose is to make available information about the rose and promote the exchange of ideas.

The fever generated by rose exhibiting would be impossible to explain. Many rosarians truly do not enjoy exhibiting—they find their joys in other ways—rose hybridizing, photographing roses and others in the study of the rose. Old rose enthusiasts have formed clubs which are devoted to our rose heritage. All of these groups contribute to the whole in describing the pleasure to be obtained from rose growing. The best way to gain first hand knowledge of the rose exhibitor in action is to visit the rose show. If you have some blooms you wish to enter bring them along—you will find a helpful member on hand to assist you. You will learn much with the first hand experience and by strolling among the exhibitors. The intricate use of scissors and brushes will be an eye-opener.

Roses will grow well in San Diego with "a handful of rose food once a month and deep watering once a week"—the usual advice given to the prospective rose grower. However, if you wish to grow first class roses you will want to give this gardening routine some special study. Each garden has its own distinct soil conditions and you must familiarize yourself with YOUR garden if you wish to go all out in growing exhibition roses.

Here in Southern California proper watering of roses must be done nearly on a year-around basis. The frequency with which you water your roses will depend of course on your individual soil

conditions. I have just about come to the conclusion it is almost impossible to give roses too much water—at least in my yard. Here again, one must be aware that rose varieties (like children) are individual and some will thrive on neglect and prefer an arid condition while others like a greenhouse type atmosphere at all times. The present President of the American Rose Society has made an art out of writing his yearly catalogue, pointing out the tempermental qualities of varieties and in effect, offering a challenge to growers to grow varieties that do require special attention. Much emphasis is placed on deep-watering as opposed to hand watering with hose in hand. I am fortunate in having most of my beds covered with an adequate water system composed of series of pipes laid on top of the ground. I manage to keep my beds watered by attaching the hose to one bed or another and letting the water run slowly about three to four hours every six to seven days. I also use an overhead watering method by attaching the hose to a rainbird installed on an elevated pole, thus reaching the entire garden. There are those who frown on overhead watering of roses but I am a firm believer in the necessity, especially during the warmer days of July and August. It is true it is hard on blooms but I try to cut my blooms before hand. I really feel the bushes benefit from the washing off of old spray and it is helpful in keeping the spider mite population under control.

Mites are definitely the main problem in my garden and visits to other rose gardens have convinced me it is the number one pest in our local area—quite often not recognized by the grower. Visitors in September will often remark that their roses have gone dormant and all the leaves have dried up and fallen off. They are usually suffering from a severe infestation of mites which have completely defoliated their bushes. While a great deal of control may be obtained by consistent hosing off the bushes a miticide is usually required to keep these pests in control. Unfortunately these pests are “tiny but MIGHTY” and have remarkable recuperative powers and build up an immunity to spray easily. The best answer seems to be keep them guessing and change your method of control frequently. New products are being tried each year and each year we seem to breed a superior type of mite. Aphids of course are another early spring

visitor to your garden. I like to feed my roses with foliar food about this time of year anyway, and find it good to wash off the aphids at the same time. They are easily controlled although more persistent in some years. They aren't nearly as menacing as they appear but left alone they will distort the new growth by sucking out the juices.

I like to “dig in” the manure I apply to the garden in fall, early in the spring. Late June or early July, I apply a mulch to keep the garden cool and prevent excessive evaporation. At this time of year, I usually look around for whatever is available at the most reasonable price. For many years we had delivered truckloads of wood shavings each year and used this as a thick mulch. It has certainly paid off as our garden soil has been much improved with the addition of this humus. Some mulches rob the soil of nitrogen and even the nitrogenized mulches now available require additional applications of some form of nitrogen to compensate.

Roses do require protection against mildew and few would disagree a preventative program should be established early in the year. Spraying is not my favorite of garden chores but I usually start this early in the growing season frequently including some form of foliar feeding. The new growth is extremely tender and early morning spraying seems to work best for me. Many exhibitors attempt to control all rose problems before the time of the show by early morning hosing of roses. I understand if this is done consistently it will in fact be most effective. Most of us however will establish a consistent preventative spray program for mildew. Some of our most beautiful roses are mildew prone but with consistent care, they will produce the most desirable blooms and are well worth the extra effort. □

A poll conducted throughout the southwest area shows the following varieties considered easiest to grow: Queen Elizabeth, Columbus Queen, Duet, Aquarius, Mister Lincoln, and Lucky Lady. Five favorite roses were — Duet, Royal Highness, Granada, Red Gold, and Peace.

Growing Vegetables

by *GEORGE JAMES*

THERE ARE SEVERAL factors which can influence the productiveness of a vegetable garden. It is helpful for the gardener to be aware of them and to know how to cope with them. If one is to enjoy gardening, he must have a fair degree of success. It is hoped the information provided here will help in achieving this success.

The soil in which the garden is planted determines to a degree the vigor and productiveness of the plants that grow in the garden. The ideal garden soil, which not many gardens have, is a sandy loam that allows strong root development, and is less likely to form a crust or retain alkali salts than denser soils. Less perfect soils can be improved by the addition of organic matter. The poorer the soil, the more the need for organic matter and time to bring about the required changes. There are some soils that will need so much time and material to bring them to a desirable condition for growing vegetables or other small plants that the improvement is not practical. Raised beds—suitable soil on top of the existing soil, retained by some sort of a wall—are a possible solution in such cases. Many suggestions for the construction and filling of raised beds will be found in **ALL ABOUT VEGETABLES**, an Ortho Book, edited by Walter L. Doty, and published by Chevron Chemical Company. This book will be available at many garden supply centers as well as book stores.

Garden soil, in either conventional or raised beds, benefits from the addition of organic matter each time the soil is worked prior to planting. Organic matter improves the physical condition and adds plant nutrients to the soil as it decomposes. The organic materials may be garden waste, (better if composted or at least finely chopped before use) or one of the commercial organic soil amendments sold by garden supply centers. The regular addition of organic matter will improve the quality of the soil, while if it is cropped for a long period of time with nothing added, the

quality will decline.

Nematodes can be a problem in the garden if they appear. They are microscopic worms that live on the roots of many plants, causing galls, nodules, or enlargements on the roots which reduce the root's effectiveness. The growth of plants is inhibited in direct relation to the nematode population on the roots, and in the case of root crops (vegetables whose roots are edible), the roots can be so deformed that they are worthless. Legumes (beans, peas, clovers for example), have nodules on their roots from an entirely different cause, so if the gardener is not experienced in identification of nematode damage, he should seek competent advice. Nematodes are more likely to be found in a sandy soil than in a heavier one, but they do appear in clays, and while tomatoes and cucurbits (cucumbers, melons, squash and similar plants) are likely to host nematodes, all other vegetables are potential victims except corn, which is not attacked. Nematodes are spread on the feet, tools, or by infected plants or soil, so they should be controlled before they infest the permanent plantings in the garden. Nematodes can be controlled by the use of a material called Vapam, which is safe to use in soil that vegetables are to be grown in. Users are advised to observe the detailed instructions on the container label for the preparation of the soil and the application rate, for success depends upon the proper use. Vapam will also control some soil borne diseases, insects, and seeds of certain weeds.

Many times vegetables are planted from seed. The seeds are planted where they will grow to maturity, and the successful germination of the seeds depends upon proper temperature, planting at a suitable depth, the presence of adequate moisture close to the seeds, and planting in a soil that does not form a crust. Usually the temperature will be suitable if the seed is planted within the time frame specified on the packet, and if planted at the depth indicated in the planting instructions.

Planting instructions usually indicate the seed is to be kept moist until it sprouts, but these same instructions neglect to offer advice on how this is to be accomplished. Soil which is wet to a depth of six inches or more and allowed to dry until it is mellow before the seed is planted will have a reserve of water which will move towards the surface after the seed is planted and thus help in keeping the surface soil moist. After planting, seeds which are planted in rows can be watered by irrigation in a furrow (made before the seeds were planted). Allow the water to run slowly until a band wider than the seeded area is wet well. There are times when seeds cannot be irrigated and seeded areas must be watered by sprinkling, and in such cases water should be applied as a fine spray and only as long as the water will soak into the soil. Once the water stops soaking in, it will collect on the surface then start to flow which can wash seeds out or cover them too deeply. Areas that are watered by sprinkling will need to be watered more frequently than irrigated areas because it is not possible to wet the soil as thoroughly by sprinkling. In warm weather it may be necessary to sprinkle several times a day to keep the surface of the soil moist. It is possible to overwater—nearly any seed can be killed by decay if the soil around it is kept in a mud-like condition. Some vegetables which are grown from seed planted where they are to mature, and which can be killed by overwatering are peas, beans, and cucurbits. These can be grown, and this danger reduced, by pre-watering the area and not planting seed until the soil has become mellow, then allowing the seed to germinate and sprouts to grow above ground before they are irrigated. This is possible if the seeds are planted in the moist soil and it is compacted around the seeds. Moderate compaction brings the soil particles closer together and closer to the seed so water from lower levels can move more efficiently towards the surface and to the seed. For this reason soil should be firmed around seeds at the time of planting.

The formation of a crust over seeds before their sprouts have reached the surface of the soil may prevent the sprouts from breaking through, or may damage the sprouts as they break through. Crust formation can be reduced by the use of a mulch, one to one and one half inches thick, placed

over the seed when planted. Sand, fine organic material, or straw can be used, but large pieces in a coarse organic mulch may prevent seeds below them from germinating. Radish or turnip seed, mixed and planted with slower sprouting seeds will sprout before too thick a crust is formed and the resulting plants will prevent the crust that forms later from being harmful to the later germinating companions. Because radish and turnip seeds mature quickly, they can be used before they crowd their rowmates.

Often it is necessary to thin seedlings of vegetables whose seed has been planted where it is to grow to maturity, so there will be room for the plants to develop properly. In nature, seedlings thin themselves as the stronger plants crowd out the weaker, but depending upon this method will cause the plants that remain to be unevenly spaced and possibly closer together than desirable. A more uniform spacing results if the plants are thinned by pulling some out. Seed packets usually have directions for thinning, if needed. The packets tell at what size to thin, how far apart to space the remaining seedlings, and sometimes a picture of a seedling, all of which builds the gardener's confidence.

Seedlings of some vegetables—lettuce, cabbage, parsley—can be lifted with roots and transplanted to other locations, so there will be room for all to mature properly. Other seedlings, beets and lettuce, can be allowed to grow to a size that can be used on the table before being thinned. Root crops, cucurbits, beans and peas, do not transplant easily, so the extra seedlings of these are discarded.

Weeds restrict the growth of all plants by competing with them for food, water, and space and so the removal of the weeds before they grow to a size that competes is important in growing a worth while vegetable crop. Small weeds can be picked from between vegetable seedlings at the time of thinning, and weeds that grow beyond the seeded strip, or around transplants, can be removed by shallow hoeing. It is wise to be sure not to damage the roots of small plants by working the soil too close to the plant or too deep. Later, when the seedlings are partially grown, the soil between the rows can be hoed or cultivated to discourage weeds and break the crust so water and air will enter the soil more easily.

The first garden or two are likely to be too

large—it is human to over plant. As a result, some vegetables that are past their prime may be used, and some may be wasted. After gaining experience as to the needs of the family and the yield per row, it should be possible to make plantings that will meet the needs and not be wasteful. If vegetables are grown to can or freeze, plantings can be designed to provide for this necessity, and such plantings will yield the best—both quality and quantity, if planted to mature when weather is the most favorable for the particular variety. □



If you have a sunny corner on a deck, porch, patio, or doorstep, you can grow many different vegetables, herbs and fruits. Tasty favorites such as tomatoes, cucumbers, squash, eggplants, peppers, scallions and strawberries can be grown in clay pots, redwood tubs or hanging baskets. In fact, some varieties have been developed specifically for container planting.



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Tree(s) of Life

by SHARON SIEGAN

WATER LILIES, papyrus, palms—all are commonplace to California. But to one just arrived from a Midwest high-rise, such plants were known only by their past, for they are rooted in the prehistory of the great cultures of the ancient near East. Along with the fig and pomegranate, also “naturalized” Californians, these plants achieved immortality. Far from their native habitat, their seed has renewed itself throughout 5,000 years of known history. Curiously, these plants share another aspect of immortality—they are nominees for the “Tree of Life”.

“In the middle of the Garden of Eden stood the Tree of Life”—our Bible says this but offers no further identification, and even today there is no certainty as to which tree was meant. The likeliest candidate appears to be the date palm. Such palms were prevalent in the Holy Land, the date being a dietary staple in Biblical times. More anciently, along with barleycorn, gold, and silver, dates were weighed out as a medium of exchange throughout Mesopotamia (today’s Iraq). Dates were a measure of prosperity for country and population; taxes were assessed in them. They served as fruit, as a sweetener, and in the preparation of many foods. In addition, dates could be stored without fear of spoilage.

Stylized palms are found on Babylonian wall paintings and Assyrian stone bas-relief. In neighboring Iran, Luristan bronzes (horse trappings and other portable items) were decorated with a Tree of Life, typically palm but occasionally pomegranate. The prototype for the Tree of Life appears in Sumerian artifacts dating back to the third millennium B.C. A stylized tree of unknown descent is flanked on each side by a beast or godlike man, with sun disc rising above.

India also has a Tree of Life. It first appears in protohistoric art, flanked by a mother goddess. Identified as the sacred Bo tree, it is credited with being the site of Buddha’s enlightenment. Three branches, signifying the stages of his insight,

extend from each side of the central trunk with the top foliage reaching toward the sky or Nirvana. The Latin name for the Bo tree is *Ficus religiosa*, or sacred fig.

Despite differences in stylization, the format for the Tree is basically three bilateral extensions jutting out from a central stem, forming seven branches. Seven has always been a mystical or magical number. Our week contains seven days, names by these early peoples for sun, moon and the five planets visible to the naked eye. This number, coupled with the frequent inclusion of a sun disc, suggests cosmic association. For the Tree, like the sun itself, life is renewed daily and yearly.

Our Tree of Life candidates share other qualities—each is a tree whose fruit is edible and has long-keeping qualities perhaps serving more as a staff of life than a preventative of death as we know it. These were not the only candidates. Another, seemingly less likely, was the Egyptian papyrus! Technically papyrus is not a tree, but growing to a height of up to 25 feet (as it did in ancient Egypt) presumably compensated for this. And although it bore no fruit, the plant itself was edible. The pith was eaten raw or cooked. Best known to us as a predecessor to paper, papyrus had multiple uses. The Egyptians carved utensils from the root or burned it as fuel. Cloth and cord were made from the stem. Bound together, the stems were used to construct boats for the brisk Nile trade or as columns for temple supports. Capitals on these columns bore stylized palm, lotus and papyrus designs.

To ancient Egypt, the papyrus symbolized fertility. Understandably so, for in the delta where it thrived (but has long since vanished) papyrus thickets teemed with life: animal, reptile, insect. Cattle trod pathways through the reeds and birds flew above them. In tomb paintings, pharaohs and their families hunted from skiffs in the thickets.

As a hieroglyph, papyrus means green (verdant, unripe) and symbolically became synonymous with

youth and joy. Papyrus was the magical sceptre of goddesses. It was used for magnificent bouquets, symbols of triumph and gladness which were offered to the gods and the dead. And, it too served on occasion as a variant of the sun's disc.

For the Egyptians, papyrus was literally life-giving in its multiplicity of gifts. The ancient Egyptians believed in life after death as a continuation of life on Earth. Since the pleasures of this Earth would be available and enhanced, papyrus was understandably a necessity for the dead. Papyrus served the dead in many forms. Processed, it was the scroll upon which was written The Book of the Dead, a series of magical incantations to ward off dangers and ease the journey into the after-world. Alone or in bouquets, the papyrus flower was a welcome funeral offering. Hieroglyphic drawings of the plant and its various applications were meant to provide continuous pleasure, protection and usefulness in the world beyond.

Although both lotus and waterlily flowered in ancient Egypt, only the waterlily, *Nymphaea cerulea*, was indigenous. The true lotus *Nelumbo* was an import from India, arriving late in Pharaonic history.

The waterlily (or blue "lotus") was famed for its fragrance, described as a "delicious, delicate perfume suggesting divine life". In one of the earliest Egyptian myths, this scent was credited with daily reviving the sun from its expiration of the night before. In a later creation myth, a different version poetically proclaims the "lotus" to be the womb-like cradle from which the sun was first born and to which it nightly returns. Not surprisingly, the lotus motif was popular, adorning temple columns, jewelry, tomb wall paintings, and many objects of household use and furnishings. Whether to delight the senses or provide magical protection, it served as constant companion to the dead; for it must be remembered that all of these artifacts were excavated from Egyptian burials.

Aside from its symbolism, the plant performed a very mundane function; from its rhizome was ground a flour to bake bread.

The true lotus was a flower of creation for India. It was the symbol of the great mother goddess and the embodiment of fertility, worshipped by pre-Hindu cultures. The association exists

even today as evidenced in this Tibetan chant: "The gem of creation is in the Lotus. For Brahma was born from a Lotus. It is his emblem." The lotus itself is seen as a life source, rising from the earth which provides its generative power and transcending its lowly origins to flower in purity. With Buddhism, the symbolism spread so that in Japan today the lotus is believed to epitomize truth and purity.

But it also remains a food staple. Both seed and rhizome have been used in the preparation of bread, and for some it is highly prized as a means of promoting fertility.

Since, according to Hindu theology, life and death are natural and inevitable precursors of each other in the continuing cycle of existence, "immortality" as we define it, is meaningless. As a life force, the lotus symbolizes all creation, cosmic and otherwise.

Thus it can be seen that every Californian lucky enough to have garden space can grow his own Tree of Life—and dine on it. Regretably the immortality claim seems effective only for the species. □



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Flower Arranging Guidelines

by ADRIENNE GREEN

Photos by Betty Mackintosh

LIKE ALL OTHER art forms, flower arranging is guided by the principles of design. Arrangements with aesthetic appeal demonstrate the wise use of proportion, scale, balance, dominance, contrast, and rhythm. Through the illustrations each principle in turn is highlighted.

Proportion means amounts and areas, such as the amount of plant material in relation to the container; even the amount of one kind of plant in relation to another. Pleasing proportions suggest inequality of the ingredients, avoiding a half and half feeling or division of interest. In picture one, the vertical line established by the *Phormium tenax* (New Zealand flax) is taller than the container. There are more cymbidiums than any other kind of plant material. The *Cordyline stricta* leaves near the cymbidiums are in the minority.

Scale involves the relative sizes of the design components. In picture two, the large ceramic container becomes an appropriate choice for the dramatic *Banksia prionates* and the strong eucalyptus bark. They are all related in size.

Balance means visual stability and there are two kinds. In symmetrical balance shown in picture three, just about the same amount of plant material is on one side of the vertical axis as on the opposite side. To counteract monotony there is variation in placement of the stems of *Leucadendron decorum* 'Royal Gold' and *L. discolor*. The compote, an original ceramic container by Trudy Toulis, continues the formal balance.

Asymmetrical or informal balance is the balancing on either side of an axis of unidentical forces or materials. In picture four, the distribution of the *L. galpini* and the *Protea obtusifolia* are unlike on opposite sides of an imaginary axis. On the taller side there are more flowers. The eucalyptus bark and the extra stem of *L. galpini* on the shorter side, establish a feeling of equilibrium for the design.

Dominance implies emphasis and can easily

be achieved through repetition. In picture five, the circular form of the 'Howard Asper' reticulata camellia is echoed by the round bronze basket and the curving silhouette of *Calothamnus validus*.

Contrast shows off differences. Picture six includes an assemblage of rusty items contrasting with elegant cymbidiums, *Calothamnus validus* and *Cordyline stricta*. Variety adds interest to a design. The three kinds of plant material are unlike in form, color and texture. Shapes of the vegetative areas among the design components are different.

Rhythm is movement through the arrangement. The eye should travel easily from one part to another. Picture seven demonstrates ways to achieve rhythm. The arrangement begins with a rhythmic dried wisteria vine which has been painted black. The color is repeated by the shiny black container, the lacquer base, and the tips of the *Protea nerifolia* 'Pink Mink'. Repetition of hues, shapes, materials and lines is one way to establish rhythm.

Line direction is another way to achieve rhythm. The eye is carried down from the culminating loop of the wisteria around the base of the container and up the *Calothamnus validus*, which leans slightly toward the top of the wisteria thus completing the suggested oval. Graduation is still another way to attain rhythm. The top of the design is lighter than the bottom part, where the heaviest concentration of plant material is located.

Why not try your skill in finding the design principles of each arrangement? Remember, they are proportion, scale, balance, dominance, contrast, and rhythm. See photos Pages 48-49. □

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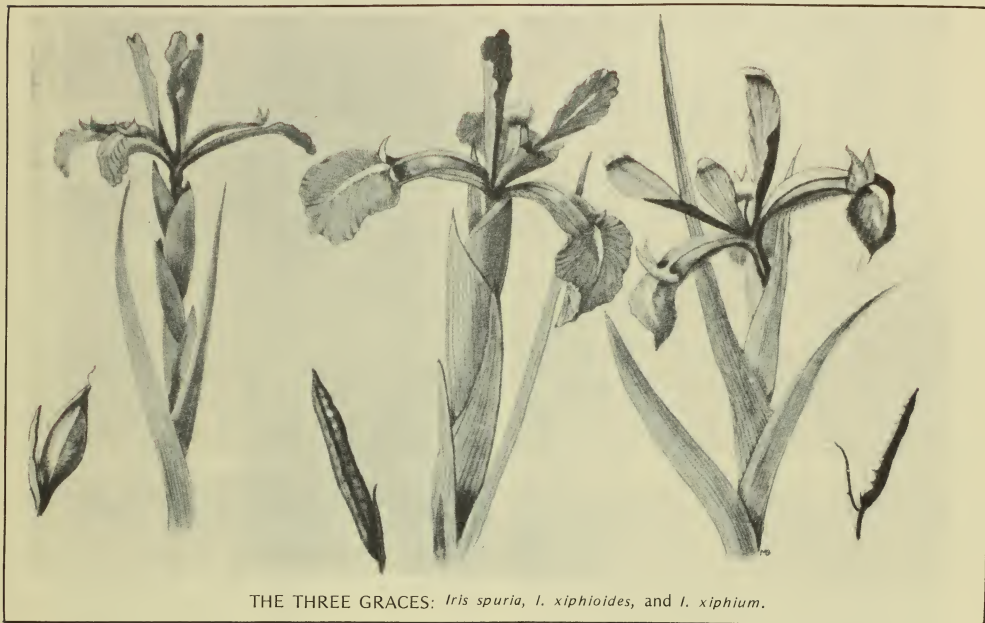


EIGHT

The Three Graces

by MARY BENBOW

The author is a highly respected English irisarian. Residing in London, she is a member of the British Iris Society.



THE THREE GRACES: *Iris spuria*, *I. xiphioides*, and *I. xiphium*.

With our trio of irises, *Iris spuria*, the Butterfly Iris, *Iris xiphioides*, the English Iris, and *Iris xiphium*, the Spanish Iris, one is immediately reminded of that well-worn theme, so beloved of the Italian Renaissance painters, the three Graces, not alike in every way but each equally lovely in her own right. It is not for me to say which is the most beautiful, but merely to discuss briefly their similarities and differences, with a word or two as to their origin and the culture needed to keep them young and fair.

Iris spuria

It has been said that *Iris spuria* bears some resemblance to *I. xiphium*, but the sight of the flowers, poised and trembling on a windy day, just like the early summer butterfly, does make it distinctive. However, I must admit that there is a certain something, possibly the greenish central ridge of the fall of the Butterfly Iris and the yellow streak on the blade of the fall of the Spanish Iris, or the sub-quadrate crests of both, which gives them a rather sisterly look. There however the similarity ends, for *I. spuria* stems from a hard rhizome and *I. xiphium* from an ovate bulb. The standards of *I. spuria* are closer together, more ruffled than in the Spanish type, and the style-arms are smaller and narrower. The stem is sheathed in three or four reduced leaves hiding the internodes; this is a distinctive feature and a considerable aid to the identification

of this iris. The capsule is oblong and beaded, with a double ridge at each angle, which is unusual and only occurs again in *I. graminea*. The seeds are brown, cubical and smooth, with a loose papery covering. There are many forms of this species, the native range extending from the Far East to France, Spain, the Danish Island of Saltholm, and even England where it is recorded in Dorset.

Iris xiphioides

A superb iris this, with its broad and exquisitely-pencilled falls, often as ruffled as those of any modern tall bearded iris. The standards are somewhat similar in shape to those of *I. spuria*, but are rather short in comparison with the falls, whereas the Butterfly Iris and the Spanish Iris are perhaps a little better balanced proportionately. The colors of the English Iris range from purple and blue to white, but no yellow forms have yet been raised. The style-arms are broad, with triangular crests. The stem, often from twelve to eighteen inches long, has a terminal head of two or three flowers, and the leaves are of a glaucous green, with an inner surface of silver. It is interesting to compare the stems of the English and Spanish types. The capsule of *I. xiphioides* is about 4 inches long, considerable larger than that of its relative, and tapers at each end. The seeds are wrinkled, round, and dark mahogany in color. Clusius noted that the ripe seeds rattled in the capsule when shaken. It flowers later than *I. xiphium* and needs a damp situation, with plenty of sun in the summer. It is noteworthy that the tips of the leaves do not pierce the soil until after the New Year, whereas those of other iris species mostly appear in the autumn. Its native range is confined to the Pyrenees and to hills and damp pastures of north-west Spain. Under these circumstances it is strange that it should have been called the English Iris; in Clusius's history of Spanish plants (1575) he states that it had been brought to him from Bristol, to which port it had probably been shipped by traders and subsequently planted in local gardens.

Iris xiphium

The last of our three Graces, and certainly not the least lovely, it has become the Florists' Iris, a fact which seems to be source of prejudice amongst some growers, although I cannot think why, as in all its varying modern color-forms it can be most decorative. It grows from an ovate bulb, producing bulbets in pairs, on either side. The stem varies from about 12 to 18 inches in height, and the spathe-valves, narrow and green, enclose 1–2 flowers. The falls are long and flaring, with a very striking yellow streak on the blades; the standards open strongly and are usually in a paler shade than the falls. The style-arms are broader than the haft of the falls; they are handsome. The capsule is long and narrow, but shorter than that of *I. xiphioides*, and the seeds which are small, yellow-brown and D-shaped, are quite unlike the round dark red seeds of the English Iris.

The answer to the question so often asked, "What is the difference between the Spanish and the Dutch Iris?" is that the Dutch growers have worked extensively in crossing *I. xiphium* with various related Spanish and North African species, and are now producing the great range of colors which appears in the florists' shops, and if we wish, can so easily be repeated in our gardens. Both the Spanish and the hybrid or Dutch irises are easy to grow in a sunny border, but as small bulbets form on each side of the parent bulb, they tend to deteriorate unless they are lifted and sub-divided. The species themselves, such as *I. lusitanica*, *I. tingitana* and *I. fontanesii* are more difficult to grow than the modern hybrids. The last-named is fairly hardy, but I have found it shy-flowering, and unless one is a real student of the species, it is better to grow the hybrids. Plant in full sun in well-drained soil, and replant every second or third year.

Try all three of these lovely irises, bearing in mind their likes and dislikes, and see what pleasure they will give you.

For Love of Rare Trees

by ALICE CLARK

Part two of a two-part article begun NOVEMBER–DECEMBER 1975.

FALL-BLOOMING TREES in the garden of Walter and Marguerite Ames at 7740 Hillside Drive, La Jolla, were brought to the reader's attention in the November-December CALIFORNIA GARDEN. Choice varieties that brighten Marguerite's landscape from spring to early summer are covered in this issue.

The spring song of April is sung by the Japanese white wisteria whose drooping racemes are the very essence of oriental grace. The real aria comes when you open the gate and behold the Japanese Maple, *Acer palmatum*, that highlights the front of the lath house. The pink cloud of new foliage that covers it leaves you breathless. After this first flush of color, these leaves, which are cut and recut as fine as feathers, stay a lively green until autumn. There are other forms of *Acer palmatum* besides this variety, but few in San Diego can compare with its elusive beauty.

Across from the maple, rosy shades come up again in May to highlight a pink locust, *Robinia hispida*. Clusters of pea-shaped blooms, among lacy pinnate leaves, enliven the small tree. Just beyond is a larger locust with handsome lavender flowers, which Marguerite likes better.

In late April the bare branches of the Chinese fringe tree, *Chionanthus retusus*, are enveloped in four inch tassels of dainty, pure white, fragrant florets worthy of their Greek name (snow flower). Coming upon this dream in full bloom you seem to hear church bells and see a beautiful bride beneath this bower of white. This rewarding and unusual small tree is hard to find in the nurseries but it is worth hunting for. It requires full sun, good soil, and adequate drainage.

As might be expected, a small Japanese garden with bridge, pebbled dry creek, and three attractive ground covers flows down a gentle slope. Beneath a big *Ginkgo biloba*, a flutter with bright new leaves, sits an old gray stone lantern. A Japanese red pine, *Pinus densiflora*, with two crooked trunks, adds to the scene. Above the bridge is *Pittosporum*

Photos by Betty Mackintosh.



Chinese fringe tree—*Chionanthus retusus*

phillyraeoides, called willow pittosporum for short! An evergreen with slender drooping branches, produces small, yellow, fragrant, bell-shaped flowers in late winter and spring. The golden berries that follow look like rosary beads.

Just below the lower patio, waiting to surprise you in early February, is *Magnolia kobus stellata rosea*, called pink star, because of its 19 to 21 radiating petals. Our expert gardener has found the secret of a heavy crop of flowers on this one—heavy fertilization. Next to it is a rosy-flowered weeping bottlebrush, *Callistemon viminalis*, a great favorite of the hummingbirds. Its late spring bloom is repeated several times a year.

After crossing another bridge and rounding the back corner of the house the visitor is struck by the sight of a tree with tantalizing pale pink

foliage. Marguerite first saw one from a train window near Palo Alto and could not rest until she had three. Suckers came up and repeated the rosy pattern until now the delighted owner has seven beauties. This slender springtime joy is *Cedrela sinensis*, a Chinese relative of tree of heaven. Marguerite tells me that passers-by used to stop to exclaim over these intriguing trees before the new house cut off the view from the street.

Further along, another deciduous tree, *Laburnum anagyroides*, drapes its pendant bloom against the inner fence in May and June. This one is called goldenchain tree because of its very long racemes of soft, yellow, pea-like flowers. A word of caution: seeds of this plant are poisonous.

Passing through the next gate you come into the front garden under the April blossoms of a slender *Jacaranda acutifolia*. Sweeps of blue iris and blue *Agapanthus africanus*, better known as Lily-of-the-Nile, reflect the sapphire shades above them. Marguerite discovered the importance of color relationship when she studied her husband Walter's favorite old-master paintings in the Timken Gallery in Balboa Park. There she noted the special use of blues to deepen perspective and to maintain peace with other colors.

Near the center of this area is an unusual oriental, the seldom seen but choice white orchid tree, *Bauhinia variegata candida*. Blooms hover over the twin-lobed leaves like butterflies. Near the wall, *Aesculus carnea* 'Briotii', a smaller variety of horsechestnut, is a treat in May (especially for homesick easterners) when its branches are tipped with eight-inch rosy plumes that almost hide the young leaves. The flowers are best seen against the sky as in the photograph. This tree, attractive even when bare, is strongly recommended for home gardens. It will do well even in a lawn.

At the far end, on each side of the front garden, is a striking *Eucalyptus ficifolia*, which shows blazing tufts of red-gold at any time of year, even January. This is one tree the public has discovered. Here Marguerite uses orange impatiens under the trees in spring to complement the color, and shrubs of copper-leaf, *Acalypha wilkesiana*, in October for the same effect. In the background a flame vine, *Pyrostegia venusta* (*Bignonia*) carries the colors in the fall and winter, while *Phaedran-*

thus buccinatorius, formerly known as *Bignonia cherere*, strikes its fiery notes in the first half of the year.

A great show of camellias adds another oriental touch beginning in January. The red blooms that accent the shining dark-green leaves are those of 'Builio Nuccio', 'Blood of China', and 'Glen 40'. They were chosen to make a strong, instead of confusing, blend of colors.

Rare tree enthusiasts will want to note a large evergreen, *Talauma hodgsonii*, on the island in front of the house. Several times a year it puts out leaves of rich translucent red, more noticeable than the ivory-white flowers which do not last long. This relative of our American magnolia is far from its native home in the Himalayas.



Pink chestnut tree—*Aesculus carnea* 'Briotii'.

There are many more unusual plants and trees both in the ground and in oriental pots on the patios of the Ames' garden, plus collections of dracaena, bamboo, cycas, ginger, palm, and pine, including the bristlecone. Let us know if you would like to hear more about Marguerite's specialties.

Plants speak for themselves but those mentioned here are also the personal expression of one grower's love for the choice rarities which she has selected to nurture through the years. □



Goldenchain tree—*Laburnum anagyroides*.

DID YOU KNOW. . . that "sops-in-wine" and "sops-in-beer" were carnations which were added to wine, beer, and ale because of their clove-like fragrance.



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HAZARD PRODUCTS

CYMBIDIUMS

By Fred Stewart

CYMBIDIUMS are among the easiest of all orchids to grow.

They can be successfully grown and flowered in all the temperate parts of the United States and the world. Each year Cymbidiums are becoming more popular, for they are, from many standpoints, one of the most satisfactory of all orchids to grow. Their vigor, ease of growth, pleasant appearance when not in bloom, long lasting flower quality and great range of rich pastel colors, are all reasons for their increasing popularity.

With Cymbidiums we must fix in our mind that they are cool growing terrestrials (plants that grow in soil) and that they put out a great deal of growth each year, compared to other types of orchids.

In California, where they can be grown out of doors, Cymbidiums may be grown in a lathhouse where conditions are favorable for Camellias, Azaleas and other shade loving plants. They are often grown successfully in the ground under trees where the shading is not too dense and the tree roots do not rob them

of nourishment and moisture. If grown in pots or tubs under trees, this is not a problem.

In areas where winter freezing occurs, a glasshouse is required to protect Cymbidiums from below freezing temperatures. When grown under glass, a minimum night temperature of around fifty degrees is considered optimum. When grown out of doors, Cymbidiums will tolerate temperatures around, or even slightly below, freezing. If the temperature should drop to freezing though, a bed sheet, sack or sheet of flexible plastic should be thrown over the plants for their protection.

SUITABLE SOIL

Cymbidiums can be grown in soils suitable to other shade loving plants. An important fact to bear in mind in formulating a Cymbidium soil is that the drainage must be good. Though Cymbidiums require

Fred Stewart is a popular commercial breeder of orchids with headquarters in San Gabriel, California.

great amounts of water during the growing season, they will not tolerate any standing water around their roots. Most composts today generally contain many or all of the following ingredients in varying proportions:

- (1) Leaf mold for physical properties, food value and beneficial action.
- (2) Clay free silt sand for body.
- (3) Garden peat for physical properties, acid reaction, food value and moisture retention.
- (4) Palco wool (ground redwood bark) for buffering action, acid pH and general physical properties.
- (5) Fir bark for physical properties, acid reaction, food and moisture retention.
- (6) Lime for proper acidity (around pH 6)
- (7) Fertilizers for food.

The basic facts to bear in mind when you mix your soil are: make sure it is open and porous, has an acid reaction and that the drainage is thorough.

Assuming that we do have a carefully formulated mix with sufficient food value and good drainage, we must now balance this off with generous watering in order to assure the plants optimum growth. During the active growing season, which runs roughly from March through September in most parts of the United States, Cymbidium plants should be watered sufficiently to keep the compost quite on the moist side, in fact quite wet compared to Cattleya culture. One of the main causes of leaf tip die-back is insufficient water during the growing season. It is important when watering to see that the plant is thoroughly watered. Sufficient water to avoid shriveling of the bulbs is a good general rule during the cold winter months.

REPOTTING

A mature Cymbidium plant growing in a pot or tube is generally repotted or divided every two or three years. Repotting is necessary when the plant has filled the container with its growth or when the compost has broken down. The best time for repotting a mature plant is as early as possible in the spring after the plant has flowered, at least by the end of May.

If a plant that is being repotted

Continued on page 62.

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The Mistreated Sansevieria

by ANN SHORE

Ann is an expert on shade plants and grows them commercially.

THE *SANSEVIERIA* is another member of that prolific family *Lilaceae*. It is a herbaceous perennial having white fleshy roots and is easily grown, making them highly satisfactory houseplants.

Why misunderstood? To begin with, it is called a number of other names. For example, snake plant, mother-in-law's tongue and bowstring hemp. Why snake plant? We usually associate a snake as a creature crawling and slithering on the ground. The *Sansevieria* is upright, tall and straight. Why 'mother-in-law's tongue'? Not having had one I can only assume some irate relative through marriage used that description as a result of having received a tongue lashing. Bowstring hemp? Well, that seems most descriptive, because the leaf when torn is thready and is known for yielding fiber.

Why mistreated? I have seen this plant used in outdoor planters in full sun. The leaves become bleached, colorless masses, crowding and multiplying, clinging tenaciously to life. There is never an appreciative glance in their direction. With hardly a chance for life, they look horrible—a gross misuse of plant life.

Research indicates fifty-four varieties but there may be more undiscovered as yet, hidden in dark rock crevices or tree trunks in their native tropical Africa and India regions. There they attain heights of from four to six feet.

My collection numbers ten at present. These are the ones I have and shall discuss here. The best known, of course, is *Sansevieria trifasciata* followed by *S. trifasciata laurentii*, *S. t. 'Hahnii'*, 'Golden Hahnii', 'Silver Hahnii', then *S. subspicata*, *S. parva*, *S. parva variegata*, *S. cylindrica*, *S. suffruticosa*, and *S. stuckyi*.

Sansevieria trifasciata has stiff, erect, leathery lanceolate leaves, one to two feet in height (under normal indoor growing conditions) with dark to light green cross bands. Its flowers are small and an insignificant white but they are fragrant. Bloom is a rare treat as this one is not prolific—it's only

temperamental characteristic.

S. trifasciata laurentii is the same as the above except for half inch wide yellow bands on either side of the leaves.

S. t. 'Hahnii' is a sport of *laurentii*. A bird's nest miniature, it grows as a low rosette with oblong leaves, rounded at the base, tapering to a sharp point with cross bands of dark and light shades of green. 'Golden Hahnii' is a sport of 'Hahnii'. Its a compact rosette differing only by having fully variegated creamy-yellow bands. 'Silver Hahnii' is another miniature sport of 'Hahnii'. A low rosette with elliptic leaves terminating in a sharp point, the leaves are almost entirely silvery-green or pewter with very soft green crossbands accented by a dark green pencil-thin stripe along the length of each leaf.

S. parva is a very narrow, close rosette with spreading leaves. It is soft in appearance and has a refreshing green color with very dark crossbands.

S. parva variegata is like the above but shows creamy yellow striping in the leaves.

S. stuckyi is particularly interesting because of the rhizomatous rootstock forming rosettes and fanning out to cylindrical, grooved leaves. All the elements of design in flower arranging come to mind with this one. It has a rhythmic line desired for thrust, texture for contrast, and gradation of green for color. This one is an arranger's dream.

S. subspicata is a loose rosette of about two inches with flat leaves, dark green in color, lined with brown edges.

With a warm situation, houseplant soil providing good drainage, filtered light, and most important, dryness to discourage rot, *Sansevieria* is a most accommodating houseplant. You might even say it thrives on neglect.

Propagation is relatively simple, either by division or cuttings. If you choose the latter, cut a leaf about three inches in length, insert in sand or perlite, keep barely moist, and wait

patiently.

Many of our homes have dark areas— a hallway, a windowless bathroom, under a cupboard in the kitchen, or even a corner in the bedroom. Perhaps you have been perplexed over plants that have not thrived, and have finally abandoned all ideas of ever decorating with fresh greenery. Despair no more. Toss out that artificial bouquet! (Did you really have one?) *Sansevieria* to the rescue! A dish garden collection or a pretty pot of *Sansevieria* to brighten a dull corner is just what you need. But, please—no more name calling! □

Photo by Betty Mackintosh.



SKIPPER COPE'S

florascope

••••• Set begonias (tuberous) either in pots or in the ground so that their leaves point out but never to the back of the bed. If there are few blossoms and dark green lush foliage pointing up then the plants are over-feeding. Undersized blossoms with light green foliage pointing down mean they are under-feeding.

••••• Use one cup unrefined Epsom salts to one gallon water as a spray for flowers and vegetables to discourage insects, rabbits or dogs. The spray washes off easily and vegetables may be eaten fresh or cooked. Repeat after rain.

••••• After potting or handling cactus, sprinkle hands with common table salt to remove thorns.

••••• Never plant a fern any deeper than the crown was growing. Hold rhizomes in place with rocks until established if necessary.

••••• A fern garden is the best solution for that shady spot. Once established it is practically care-free.



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To Lovers of Garlic

by ROSALIE GARCIA

GARLIC IS FOR those who like it. It's not a cultivated taste—you either like it or you don't. Those who are fond of garlic find it enticing, fragrant, and delicious. The "anti's" who oppose it, do so with feeling and high emotion. To them garlic is repulsive, uncivilized, and even "un-American". The taste lingers for days, and it stinks. How can one little segment of a root of the genus *Allium* of the family of Amyryllis get so many lined up for or against it? No one can answer that. To certain peoples it is a part of their heritage, especially in the area of the Mediterranean, and in this country, those of Latin descent. But those of many other ethnic backgrounds are just as enthusiastic.

Legend has it that garlic is good for what ails you. Like peppers and spices, it is a stimulating agent that promotes the flow of digestive juices. Garlic is also thought to ward off bacterial diseases. Maybe the germs can't take it, and to this day, many take garlic dried in pill form for high blood pressure.

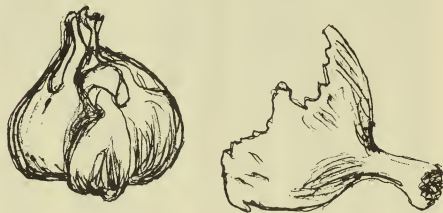
No food or seasoning goes further back in history than garlic, which is descended from a wild plant that still grows in marshy places all through the temperate zones of the Northern hemisphere. Primitive peoples discovered early the wild garlic and adapted it for medicine and seasoning, probably because of its strong odor and peppery taste. They did not have our discriminating, delicate taste buds.

Few eat garlic as a vegetable, although I have known a few children who carried the bulbs in their pockets and ate the cloves like peanuts. If their comrades complained that they stank—they did! In New Orleans, I knew a couple who had a shop in the French Quarter who had a garlic sandwich with their coffee every afternoon. They claimed they like it and it was good for their health. I tried it, one clove thinly sliced in a lot of butter, but I did not think enough of it to make garlic sandwiches a habit.

But mainly, garlic is used as an herb for sea-

soning, and seldom more than two cloves to a recipe. Many Italian recipes start off with browning one or two cloves of garlic in some olive oil, then discarding the garlic. A roast can be rubbed with a cut clove and olive oil and some slivers of the garlic can be punched into the flesh of the roast. A wooden salad bowl can be rubbed with sliced garlic which is then tossed with the oil and greens. The garlic may be removed or left in the salad. A tool known as a garlic press, in which cloves of garlic are placed, can be used to extract the juice of the clove, which is then used a few drops at a time in sauces or to rub on chops and steaks, giving just the right flavor. A few cloves added to a pot of beans or soup about an hour before they are fully cooked gives a delightful touch. To have on hand quick flavoring, a few cloves in a bottle of cooking oil or vinegar, will tone up salads and many sauteed foods.

Garlic is easy to grow. All you need is several bulbs or sets which can be purchased at a nursery or even the produce counter. Those bulbs on the



seasoning racks are often too dry to come up easily. In late fall or early spring, separate the bulbs into the cloves, put the cloves base end down in rows in good garden soil, about two inches deep and keep watered. Flat leaves up to two feet will grow, and when they drop over and become sort of dry, pull them up, tie in bunches and hang where they can dry, then store in a dark dry place. This is the common *Allium sativum*, but Bailey lists about twenty other bulbous garlics of similar growth, varying in the color and number of cloves.

Growing in favor is *Allium neapolitanum* or Elephant garlic, because it usually makes only one large bulb, often as big as an onion, much milder in flavor, and good sliced in salads and sandwiches. I find that the flavor does not hold up in cooking.

Garlic flavors are also found in chive-like perennials classified as herbs that grow on tough roots and send up grass-like leaves which carry the flavor. The more delicate one is known as garlic chives or Chinese garlic (according to Bailey *Allium odoratum*, but according to Sunset's Western Garden Book it is *A. tuberosum*). It makes a pretty grassy clump suitable for borders of flower beds, sending up long stems with umbels of white flowers which also carry the odor of garlic. Chopped leaves are a mild seasoning in salads, sauces, sandwiches, and added the last minute to soups and cooked vegetables they are a delight.

A more sturdy variety of the garlic chives which has a lavender blossom, broader leaves and a stronger flavor and aroma is known as Society garlic. It is a favorite aphid repellent for gardeners. Aphids join garlic haters and will not remain in the vicinity of such clumps.

Seldom does one find these garlic chives on the herb counters—one must get in touch with garlic or herb collectors for starters.

To the garlic lovers, to whom this article is addressed—don't try to hide your love for this delectable herb. Grow it, cherish it, enjoy it and eat it! Garlic lovers will always stand apart from the crowd! □

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(Tom Hernandez)



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BEGONIAS

MARGARET LEE

- ✓ to water plants when there are no rains; keep plants moist
NOT WET.
- ✓ to mulch with a top dressing to protect roots.
- ✓ to practice good housekeeping—clean all pots and plantings of dried leaves, dead wood, and spent blooms.
- ✓ to cut back especially if new growth appears.
- ✓ to repot those that need it.
- ✓ to feed once a week with $\frac{1}{4}$ strength of an all-purpose plant food or half strength if feeding twice a month or full strength if you only feed once a month.
- ✓ to start spray program to control pests and disease.
- ✓ to start sprouting the beautiful tuberous begonias.
- ✓ to start new plants from leaves or cuttings.

BONSAI

HERBERT MARKOWITZ

- ✓ to repot plants—leaving $\frac{2}{3}$ of roots and the soil intact; gently brush soil from roots so not to tear new growth.
- ✓ to shape root system to conform to shape of container.
- ✓ to graft deciduous trees.
- ✓ to watch watering because of the lack of rains.
- ✓ to start feeding in April.
- ✓ to watch the sun on the trees in order to prevent scorching the new growth of deciduous trees just putting out new growth.

BROMELIADS

THELMA O'REILLY

- ✓ to start pest control—especially snails.
- ✓ to spray for scale.
- ✓ to fertilize.
- ✓ to watch the watering as we have had a dry winter.
- ✓ to keep plants cleaned—trim off damaged leaves caused by any cold weather.

CACTUS & SUCCULENTS

VERNA PASEK

- ✓ to repot plants if overgrown or root-bound; use screen in bottom of pot with gravel or broken clay pieces to avoid washing out soil and nutrients.
- ✓ to groom plants for shows and the fair.
- ✓ to propagate plants by division or cuttings.
- ✓ to watch out for pests such as mealy bugs under

leaves; eliminate with equal parts alcohol and water dabbed on with cotton swab.

- ✓ to start watering as plants start new growth.
- ✓ to fertilize with 10-10-10 to promote flowering.

CAMELLIAS

BENJAMIN BERRY

- ✓ to maintain a regular watering program.
- ✓ to maintain a regular spray program and dust chlorodane under and around the plants to discourage leaf beetles.
- ✓ to continue to transplant those bushes not done last month.
- ✓ to remember NOT to fertilize a newly transplanted bush but to water well and often with a Vitamin B-1 Solution.
- ✓ to feed iron every other month to promote a healthy deep green.
- ✓ to plant new plants while they still are in bloom.

DAHLIAS

ABE JANZEN

- ✓ to place tubers into starting material and place in a warm spot to sprout; watch moisture so tuber will not rot.
- ✓ to prepare ground for planting by adding humus and fertilizers especially super-phosphates and potash.
- ✓ to drive the name stake when planting tuber in the ground.
- ✓ to plant sprouted tuber after two or three weeks—dig hole six inches deep, place tuber with sprout up about two inches from stake—cover with two inches of soil and then water.
- ✓ to keep planted tubers moist but not wet; fill hole as plant grows.
- ✓ to protect new growth from snails.

EPIPHYLLUMS

- ✓ to feed your plants with low nitrogen fertilizer as buds are forming.
- ✓ to watch for snails and put out bait.
- ✓ to check for mealy bugs—use rubbing alcohol on cotton swabs to remove.
- ✓ to check trellises and branches to make sure they are secure and buds not pushed against

the trellis.

- ✓ to keep moist—also spray branches to clean off the dust.
- ✓ to clean off dried branches and add new mulch if needed.

FUCHSIAS

CHAD KROGH

- ✓ to take cuttings of any soft, fresh green growth that may be available.
- ✓ to prune hanging baskets to the inside edge of the container.
- ✓ to fertilize with slow release fertilizer.
- ✓ to mist actively growing fuchsias with 1/5 strength solution of liquid fertilizer on a daily basis if lush results are desired.
- ✓ to pinch the central growing tip of new growth to promote a full bushy plant.
- ✓ to clean up any debris on plants or in containers to prevent fungus or rot.
- ✓ to spray with a systemic insecticide to prevent white fly and thrips.
- ✓ to check stakes and retie upright plants that have outgrown their supports.

FERNS

RAY SODOMKA

- ✓ to water and keep areas damp to help maintain humidity.
- ✓ to use insecticide for aphids and snails.
- ✓ to clean off dead fronds.
- ✓ to divide, repot, or add humus to pots.
- ✓ to fertilize with high-nitrogen fertilizer.
- ✓ to plant fern spore.

GERANIUMS

GLORIA CAVANAUGH

- ✓ to pinch your plants to force outside shoots.
- ✓ to spray for white fly and aphids—use malathion.
- ✓ to prune and pinch plants to shape and make a bushier plant.
- ✓ to check those in pots for repotting and move to next size larger.
- ✓ to groom by removing dead leaves and blossoms.
- ✓ to feed with a balanced fertilizer 1/2 strength and use twice as often as package directions.
- ✓ to water sparingly, but have a regular program.

IRIS

- ✓ to apply systemic insecticide to control aphids and thrips.
- ✓ to fertilize with a low-nitrogen all purpose or liquid fish fertilizer.
- ✓ to water more often as the season has been dry.
- ✓ to give Japanese and Louisiana iris acid food in the water; you can use camellia type fertilizer.

ORCHIDS

LOIS K. DONAHUE

- ✓ to give cypripediums a little more shade.
- ✓ to continue 10–30–20 feedings for cymbidiums.
- ✓ to begin preparations for repotting cymbidiums.
- ✓ to give cymbidiums lots of light (light, NOT SUN) with good ventilation.
- ✓ to continue snail and slug baiting—no arsenic.
- ✓ to watch for aphids and mealy bugs on all types of orchids.

ROSES

DEE THORSON

- ✓ to water thoroughly as plants are growing rapidly now.
- ✓ to feed with liquid fertilizer.
- ✓ to watch for aphids—spray with water to wash off or use a systemic such as cygon to assist in preventing thrips also.
- ✓ to check for possible early inch worms and treat with malathion or Sevin—be sure to use the powder on new growth as the liquid may burn the foliage.
- ✓ to use a preventative spray for mildew.
- ✓ to give each bush 1/2 cup of blood meal just before buds start to show color—this will intensify the color of blossoms.

VEGETABLES

GEORGE JAMES

- ✓ to plant transplants—brussel sprouts, cabbage, cauliflower, celery, broccoli, kale, onions, lettuce, collards.
- ✓ to start seeds in a protected place and transplant in April or May—beans, corn, cucumber, eggplant, pepper, summer squash.
- ✓ to plant transplants and cover to retain warmth of cucumber, eggplant, pepper, tomatoes, squash.
- ✓ to plant bulbs or cloves of onions and garlic.

GREEN THUMB ITEMS

- ✓ to divide chrysanthemums—take cuttings from old plants and make divisions.
- ✓ to set out annuals such as zinnias, pansies, marigolds and petunias for fast growth and spring color.
- ✓ to prune those flowering trees and shrubs after bloom is done and mulch with leaf mold and manure—water well.
- ✓ to mulch and reseed lawns if necessary.
- ✓ to feed lawns under trees—these areas may require frequent feedings since the tree takes so many nutrients from the soil itself.
- ✓ to plant new avocado trees for shade or fruit as the danger of frost passes.

CYMBIDIUM

Fertilizing, Growth & Division

Chart

Use low nitrogen fertilizer.	JANUARY	
Do not feed if weather cold or overcast.	FEBRUARY	
This is most dormant period.	MARCH	Divide and repot if not in bloom, or as soon as flowers cut.
Main blooming season.	APRIL	
	MAY	
	JUNE	Most rapid growth period. Use well-balanced <i>high</i> protein fertilizer. <i>Give lots of water and light.</i>
	JULY	
	AUGUST	
Use <i>low</i> nitrogen fertilizer to induce bloom spikes.	SEPTEMBER	Months in which most spikes appear.
	OCTOBER	
	NOVEMBER	
	DECEMBER	

has a compact growth habit and does not have any, or more than a few, leafless bulbs, it is often advisable to merely wash off the old soil from the roots and shift the plant without dividing to a larger pot with fresh soil. With larger plants which may have a number of rootless, leafless bulbs in the center (called Back Bulbs), it is generally desirable to remove these rear bulbs at the time of repotting and dividing.

When dividing observe how the plant is growing and try to make well balanced plants of each division. From three to seven mature leaved bulbs can be considered a flowering size division. Do not be too eager to divide into small plants, for it takes a good sized, well established plant to produce the best flowers.

LIGHT IMPORTANT

This is one of the most important factors in the successful flowering

of Cymbidiums. A good general rule is to give the plants sufficient light so that the foliage is greenish yellow, rather than a verdant green.

If the plants are grown under trees, make sure that the shade is medium to light, such as afforded by California Live Oaks. Trees such as Avocados or other dense shade types give too much shade. Several hours of clear early morning and/or late afternoon sun are highly desirable. We wish to emphasize that too dense shading is not conducive to optimum flowering.

We are growing continually that Cymbidiums produce more and better flowers when given greater light intensity than has generally been accepted as optimum. *When plants are in flower, however, heavier shading should be given to promote clearer colored, better quality flowers.*

Fortunately, Cymbidiums are subject to fewer pests and diseases than

are most garden plants. Of course, care must always be taken to see that slugs and snails are kept under control. Orchid scale can be cleaned off with a toothbrush and plants sprayed with Malathion or DDT solution. *Red Spider* is perhaps the most persistent and difficult to detect of the pests. It can be found under the leaves where it sucks the surface sap and makes the undersides appear scratchy-whitish or silvery where the surface cells have lost their sap. Malathion and the new spray, "Aramite," is very effective. There are a few root and virus diseases found on Cymbidiums. The spread of these diseases can be controlled by proper precautionary measures, such as segregating, sterilizing cutting tools, and keeping the plants in good health.

FEEDING

Fertilizing is a much discussed subject. We believe that a compost, such as has been recommended, contains sufficient plant food to last for some months. However, if it is decided to use a fertilizer, it should have an acid reaction.

If a commercial fertilizer is used, it should be applied at about one-third the strength recommended for other plants. Orchids do not like a strong fertilizing program. Brands frequently used in Southern California are Stewart's Ideal Orchid Fertilizer, Vigoro, Hyponex, Gav-iota or "312," and are applied at the rate of two teaspoons to one gallon of water about every two weeks to a month during the growing season.

An attempt has not been made to cover the field completely, but to outline a few of the basic procedures in the general culture of Cymbidiums. It must be understood that culture may vary greatly according to locality. Good common growing sense is always a valuable asset.

If you are in a locality where others are growing Cymbidiums, find a grower who is doing a good job and have him guide you wherever possible. Always bear in mind, too, that there is no short cut to good culture. You will get from your plants just what you give them in good care.

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Recreation Dept., City of San Diego.)
Office Phone Number-232-5762
Third Tuesday, Casa del Prado
President: Mrs. Harley Cope-459-7688
6608 Avenida Bizarro, La Jolla 92037

FLOWER ARRANGERS' GUILD OF S.D.
First Thurs., Casa del Prado, 9:00 a.m.
Pres: Mrs. James Ard-276-6398
3031 Karnes Way, S.D. 92117

MEMBER CLUBS

ALFRED D. ROBINSON BRANCH OF THE
AMERICAN BEGONIA SOCIETY, Second
Tues., Homes of members, 10:30 a.m.
Pres: Mrs. Don Donahue-273-9677
3251 Innuit Avenue, S.D. 92117

CONVAIR GARDEN CLUB
First Wed., Casa del Prado, 7:30 p.m.
Pres: Mrs. Virginia Souderberg-582-7098
6197 Arno Drive, S.D. 92120

FLEUR DE LEAGUE
Second Mon., Homes of members, 10:30
Pres: Mrs. Herbert Bissell-453-2963
2664 Costebelle Dr., La Jolla 92037

KEBANA INTERNATIONAL CHAPTER
NUMBER 119, Fourth Wed., Casa del Prado
10:00 a.m.
Pres: Mrs. B. Donald Gaw-485-0116

13818 Tam O'Shanter Ct. Poway 92064
LA JOLLA GARDEN CLUB
Third Tues., 1:00 p.m., LaJolla Women's Ct
715 Silverado Road, La Jolla, CA
Pres: Mrs. Bolivar Roberts-454-4988
939 Coast Blvd. La Jolla, 92037

LAS JARDINERAS
Third Mon., 10:00 a.m., Homes of mem.
Pres: Mrs. Edward C. Walter-454-1383
1512 Copa de Oro, La Jolla 92037

ORGANIC GARDENING SOCIETY
Third Fri., Casa del Prado, 7:30 p.m.
Pres: Fred Nimitz-479-7585
3815 Valley Vista Road, Bonita 92002
PALOMAR DISTRICT, CALIFORNIA
GARDEN CLUBS, INC.

Director: Mrs. Roy K. Jones II-222-9737
3971 Del Mar Ave., S.D. 92107
POINT LOMA GARDEN CLUB
Second Wed., S.D. Federal, Rosecrans
and Canon, 10:00 a.m.
Pres: Mrs. O. M. Conoley-223-7769
758 Cordova Street, S.D. 92107

SAN CARLOS GARDEN CLUB
Fourth Tues., San Carlos Club, 6955
Golfcrest Drive
Pres: Mrs. Charles Roop-466-0994
4235 Cobalt Drive, La Mesa 92041

SAN DIEGO BONSAI SOCIETY, INC.
Second Sun., Casa del Prado, 1:50 p.m.
Pres: Dr. Herbert Markowitz-224-8552
876 Armada Terrace, S.D. 92106

SAN DIEGO BOTANICAL GARDEN
FOUNDATION, INC.
Second Thurs., Casa del Prado
Pres: Mrs. Joseph Kenneally-223-6183
2260 Catalina Blvd., S.D. 92107

SAN DIEGO CACTUS & SUCCULENT
SOCIETY, 2nd Sat., Casa del Prado, 1:30 p.m.
Pres: Mr. Martin Mooney-427-6796
97 "K" Street, Chula Vista 92011

SAN DIEGO CAMELLIA SOCIETY
Third Wed., Casa del Prado, 7:30 p.m.
Pres: Capt. Ben H. Berry-435-2562
471 Country Club Lane, Coronado 92118

SAN DIEGO CHAPTER, CALIFORNIA
NATIVE PLANT SOCIETY, Fourth Wed.,
Casa del Prado, 7:30 p.m.
Pres: Mr. Fred Sproul-222-8938
P.O. Box 7497, San Diego 92107

SAN DIEGO COUNTY DAHLIA SOCIETY
Fourth Tues., Casa del Prado, 7:30 p.m.
Pres: Mr. Abe Janzen-277-4473
3521 Belford Street, S.D. 92111

SAN DIEGO COUNTY ORCHID SOCIETY
First Tues., Casa del Prado, 7:30 p.m.
Pres: Mr. David Grimes-755-0798
13651 Nogales Drive, Del Mar 92014

SAN DIEGO COUNTY WILDLIFE FED.
Pres: Frank Tiotton-726-3853
765 Alta Vista Drive, Vista 92083

SAN DIEGO EPIPHYLLUM SOCIETY
Second Wed., Casa del Prado, 7:30 p.m.
Pres: Mr. Donald Irwin-469-2469
4124 N. Rogers Rd., Spring Valley 92077

SAN DIEGO FUCHSIA SOCIETY
Sec. Mon., Casa del Prado, 7:30 p.m.
Pres: William Selby-424-3432
1333 Triton Ave., S.D. CA, 92154

SAN DIEGO GERANIUM SOCIETY
Sec. Tues., Casa del Prado, 7:30 p.m.
Pres: Mrs. Wm. Cavanaugh-224-9208
4377 Loma Riviera Ct., S.D. 92110
SAN DIEGO/IMPERIAL COUNTIES IRIS
SOCIETY, Third Sun., Casa del Prado,
1:30 p.m.

Pres: Ray Chesnik-744-3851
418 Buena Creek Road, San Marcos
SAN DIEGO ROSE SOCIETY
Third Mon., Casa del Prado, 7:30 p.m.
Pres: Mr. Richard Bechtel-442-7180
10212 Vista Delacruz, La Mesa 92041

SAN DIEGO GUNTER CLUB
Pres: Mrs. Roman Shore-728-7044
P.O. Box 828, Fallbrook 92028

SOUTHWEST HEMEROCALLIS SOCIETY
Four meetings per year, Oceanside
Federal Savings, Vista, California
Pres: Mr. Ray Chesnik-744-3851
418 Buena Creek Rd., San Marcos 92069
SOUTHWESTERN GROUP, JUDGES'
COUNCIL CALIFORNIA GARDEN CLUBS,
INC., First Wed., Casa del Prado, 10:30 a.m.
Pres: Mrs. Donald Innis-225-1464
3211 Trumbull, S.D. 92106

THE VILLAGE GARDEN CLUB OF
LA JOLLA, Fourth Thurs., 1:00 p.m., L.J.
United Methodist Church, 6063 La Jolla Blvd.
Pres: Mrs. David Westheim-459-9485
1877 Spindrift Dr., L.J. 92037

